Watershed Profile: Upper Potomac

Total Acreage of watershed: 458,506 Acres

New Households Expected in Watershed by 2020: 63,300 Households

ASSUMPTIONS

Inside a PFA

- Development inside PFA is 5 houses/acre
- Development inside PFA is on central sewer

Outside a PFA

- Development outside PFA is 1 house/2 acres
- Development outside PFA is on septic systems

Nitrogen Loads by Land Use

- Developed land nitrogen loading rate is 7 lbs/acre
- Agricultural nitrogen loading rate is 9 lbs/acre
- Forest nitrogen loading rate is .33 lbs/acre

Other

- All households have 2 persons
- Land converted to development is ½ agricultural and ½ forest

Best Management Practices Chart
for Reducing Nitrogen in the Upper Potomac Basin

	Nitrogen Reduction Rate (lbs/acre)	Annual Total Costs ($/acre)	Available acres, pounds or systems	Proposed Strategy (acres)	Cost Per Year ($/year)	Total N Reduction (lbs)
Cover Crops Small grains planted in September or early October on land otherwise fallow with no fertilizer applied. This practice reduces nitrate leaching during the winter, and also reduces erosion.	12 lbs/acre	$25/acre	133,774 acres			
Forest Buffers A linear strip of forest along rivers and stream that filters nutrients and sediments and enhances stream habitat.	37 lbs/acre	$187/acre	38,244 acres			
Retirement of Highly Erodible Land An accelerated application of practices used in farm plans on lands with a high potential for soil loss (e.g., erodible soils, steep slopes).	11 lbs/acre	$120/acre	56,485 acres			
Stormwater Management The regulatory requirement for the control of stormwater on all new development and the construction of stormwater facilities on lands previously developed without such facilities.	4.4 lbs/acre	$315/acre	102,891 acres			
Wastewater Treatment Plant Upgrades Advanced treatment of nitrogen from municipal waste water treatment facilites. Nitrogen concentrations drop from 8 mg/l to 5 mg/l.		$4,433,000	389,800 lbs			
Septic Denitrification Ecological waste treatment systems, designed to reduce, reuse and recycle household waste water and human waste.	14 lbs/system	$180/system	69,917 systems			